

Source Water Protection In Washington

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HELPING TO ENSURE SAFE AND RELIABLE DRINKING WATER

Mission

**To protect the health
of the people of
Washington State
by assuring safe
and reliable
drinking water.**



Source Water

- 💧 **water in the environment that will be used for drinking water in the foreseeable future**
 - **Up to 10 years for ground water**
 - **Watershed wide 24 hours upstream for surface waters, within 750 feet of water**

Key Vision

- ◆ protection of current /future drinking water supplies (*source water*) thru education
 - turning “data into knowledge”
 - promote pro-active pollution prevention with better data for decision makers
 - educate and engage citizens and communities as advocates

Source Water Assessment Program (SWAP)

Information about:

wellhead protection areas,

drinking water watersheds,

their susceptibility to contamination and

potential contaminant sources

are to be made available to agencies, decision makers, private sector and the general public--1996 amendments to the SDWA

GIS / Internet provides tools for inventory work and information dissemination

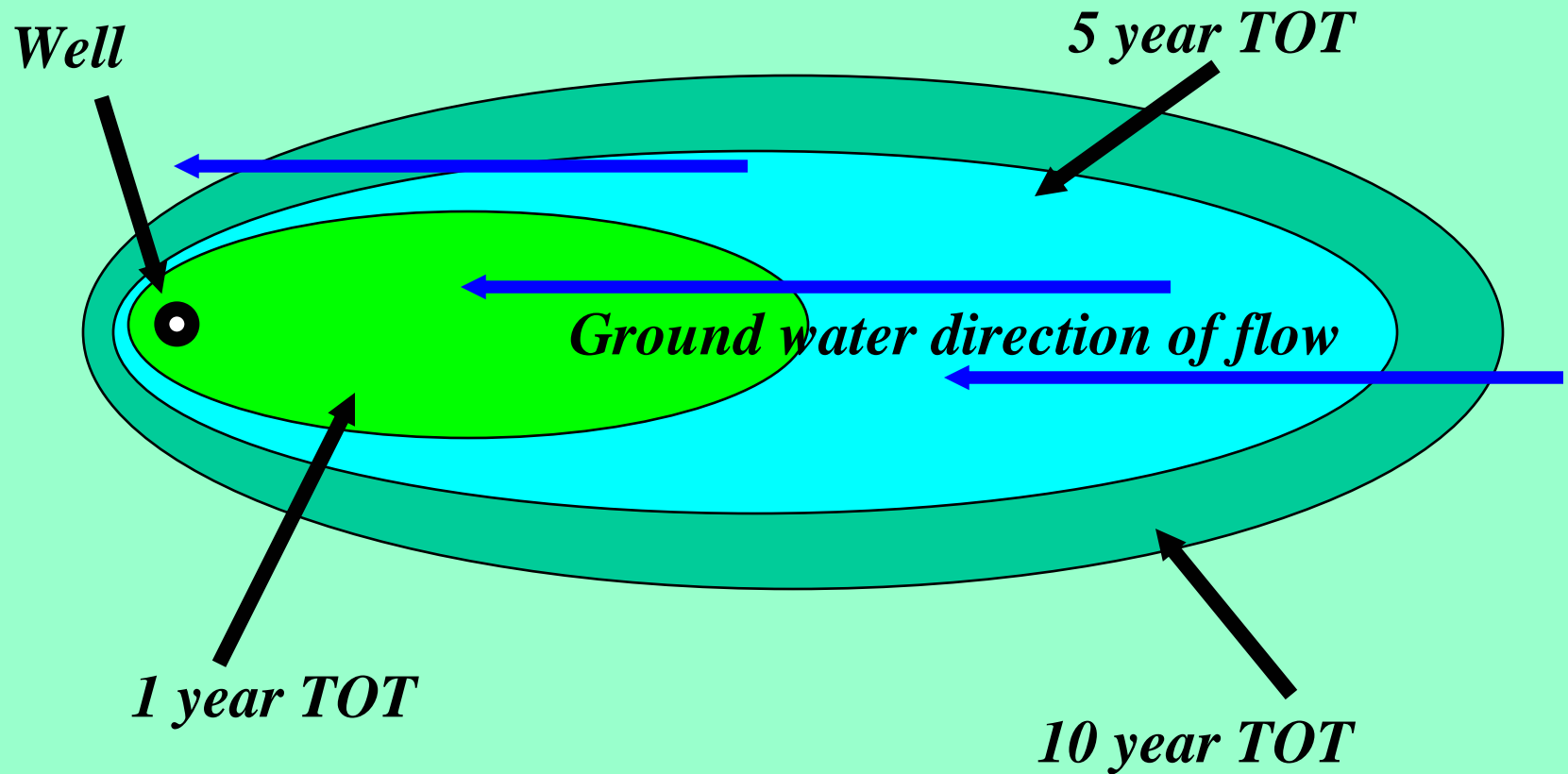
Water Systems in Washington?

- 💧 **Federally defined under SDWA**
 - **Ground water based: 3,903 systems**
 - **Surface water using: 253**
 - **Mixed: 75**
 - **Unusual (interties) 240**
- 💧 ***State defined (Group B)***
- 💧 ***Single family domestic***

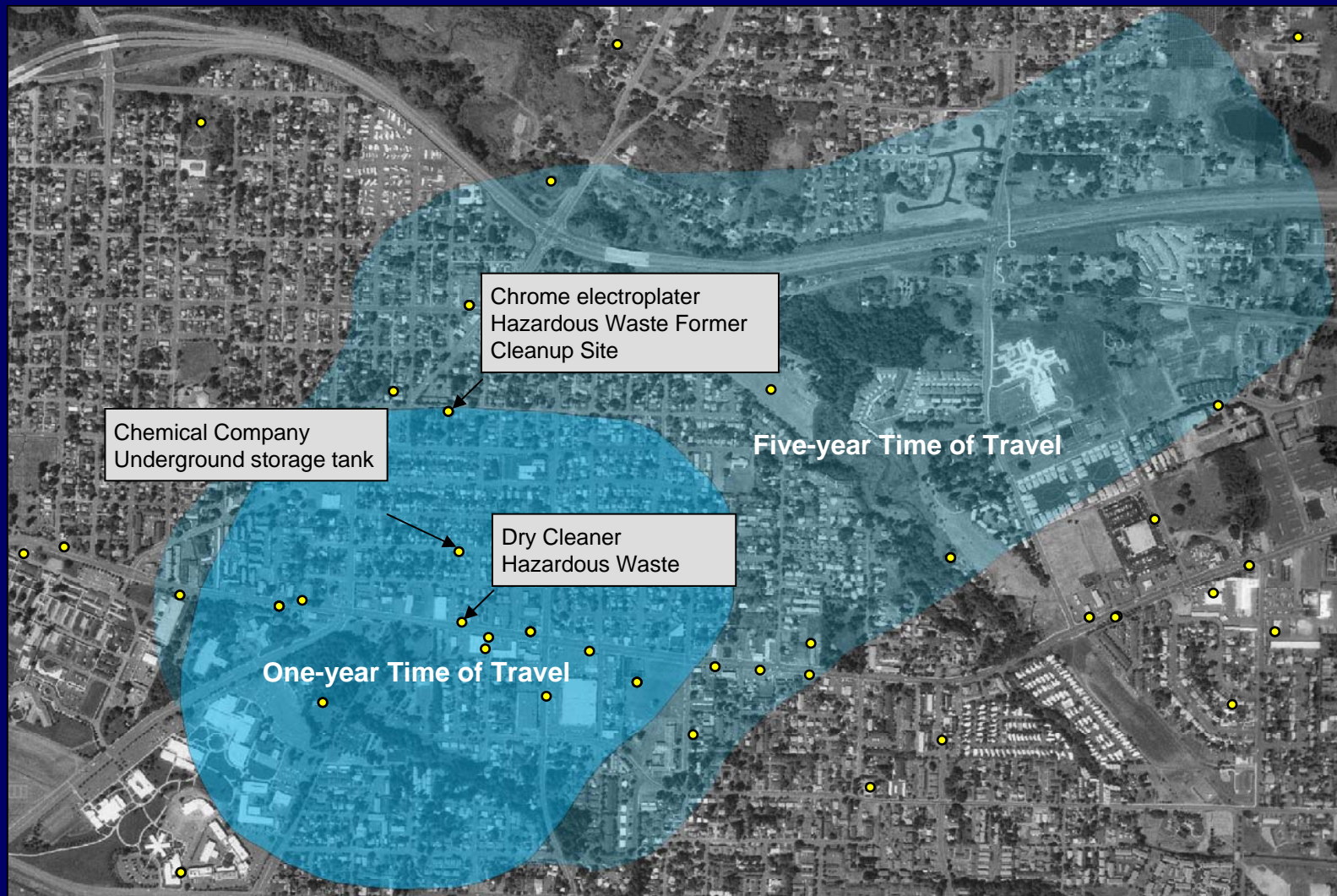
Wellhead Protection Areas: How are they defined?

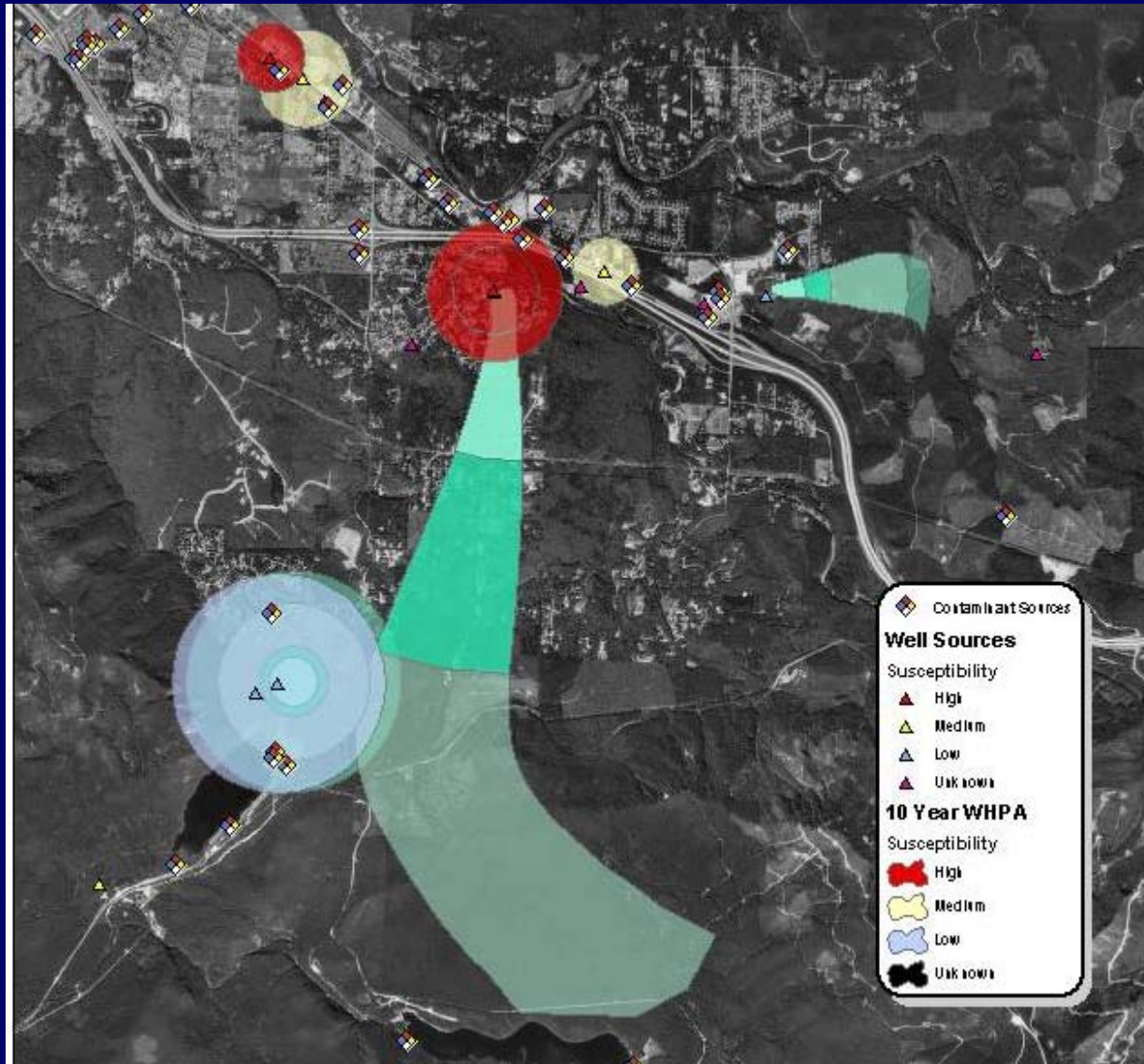
- 💧 **Arbitrary fixed radius: unknown settings -- 600 feet**
- 💧 **Calculated fixed radius: most commonly used**
 - **pumping rate & open interval most meaningful parameters**
- 💧 **Analytical or 3-D modeling**

Wellhead Protection Area components

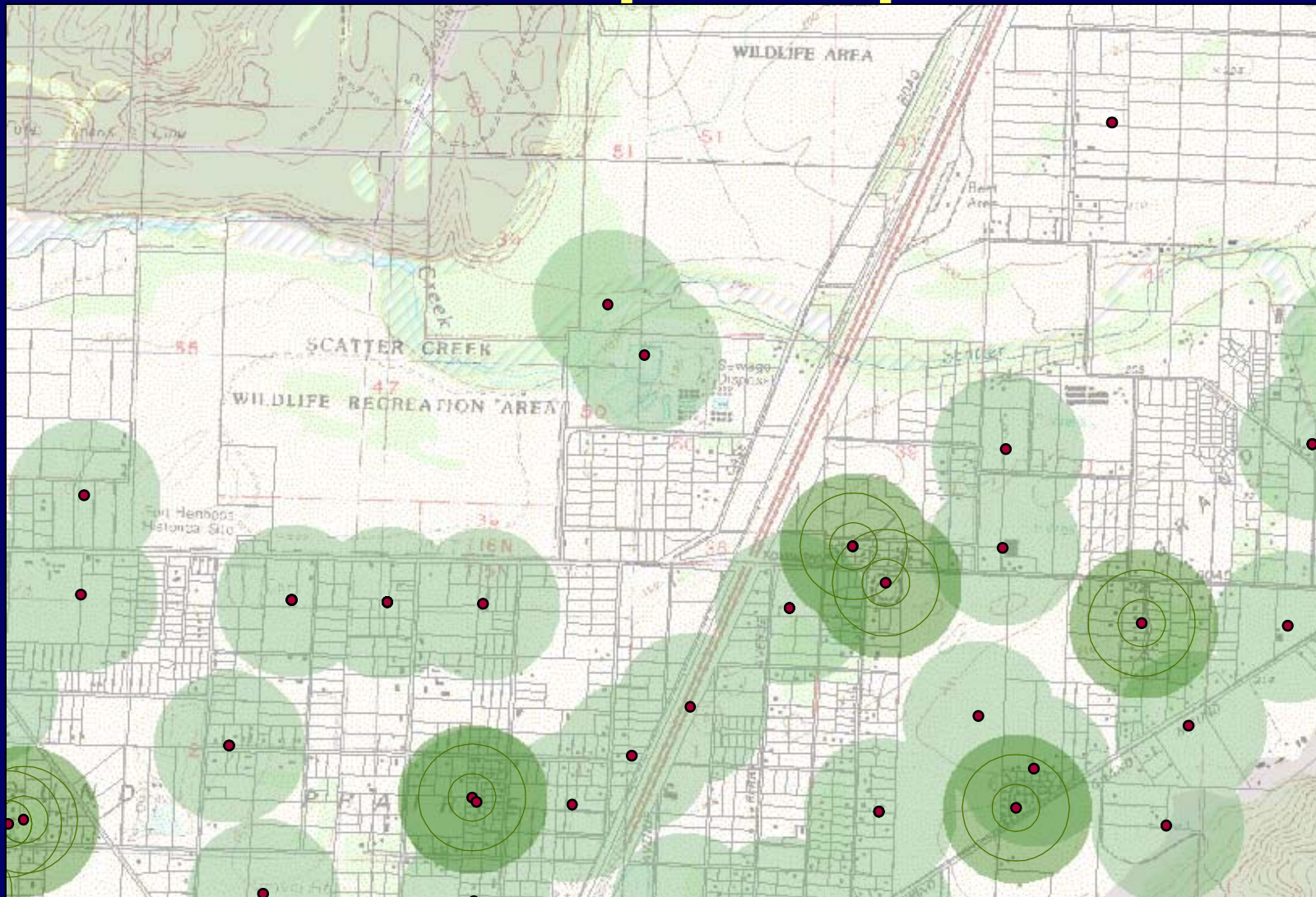


Urban WHPA



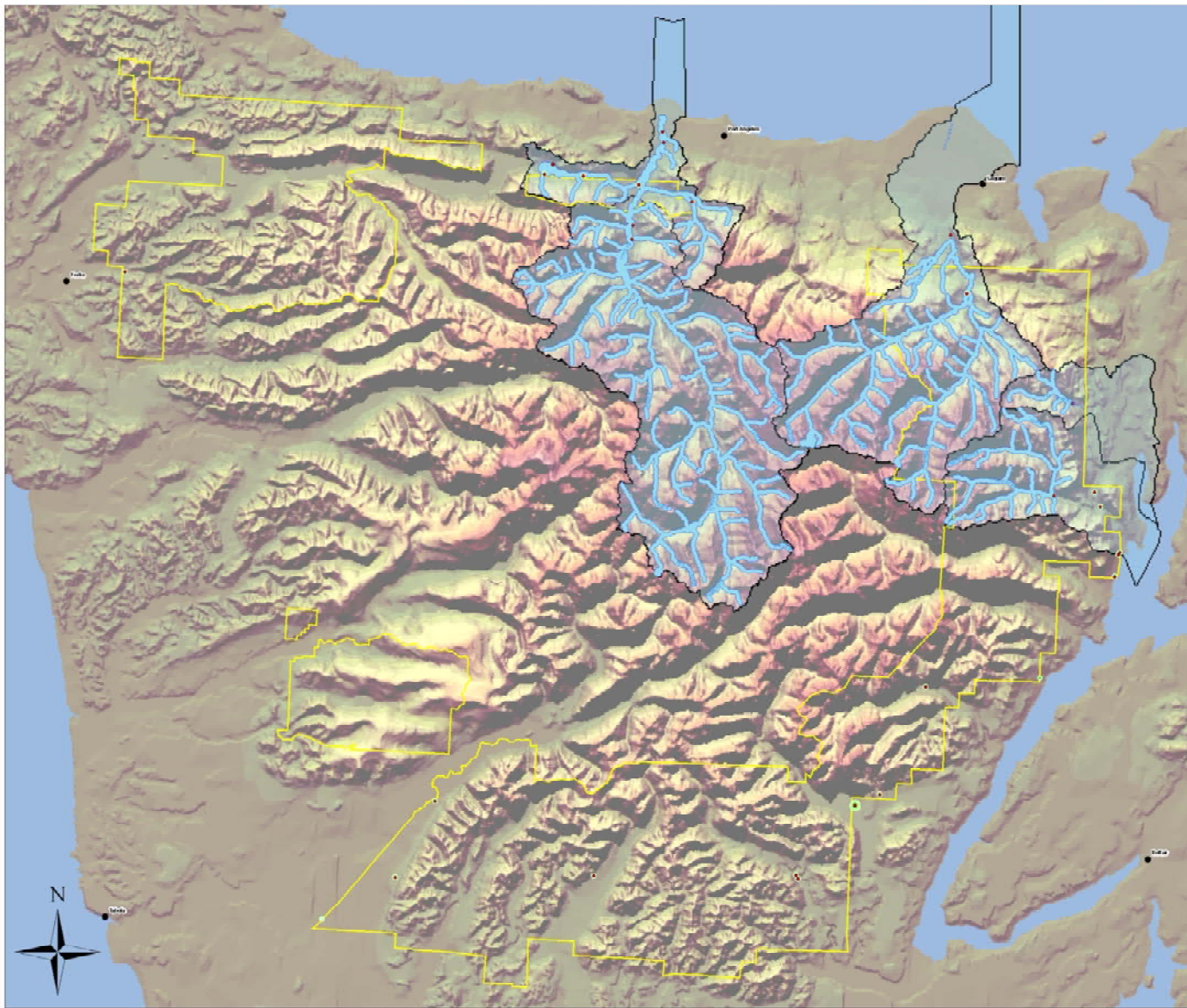


Rural development patterns



Upstream Areas of concern: surface water based drinking water

- 💧 **Upgradient of intake point**
- 💧 **SDWA requires watershed to be defined**
- 💧 **WSDOH used “surface water inventory area” to focus**
 - **24 hrs upstream, 10 yr flood event**
 - **750’ on each side of water body**



OLYMPIC NATIONAL FOREST SOURCE WATER PROTECTION AREAS

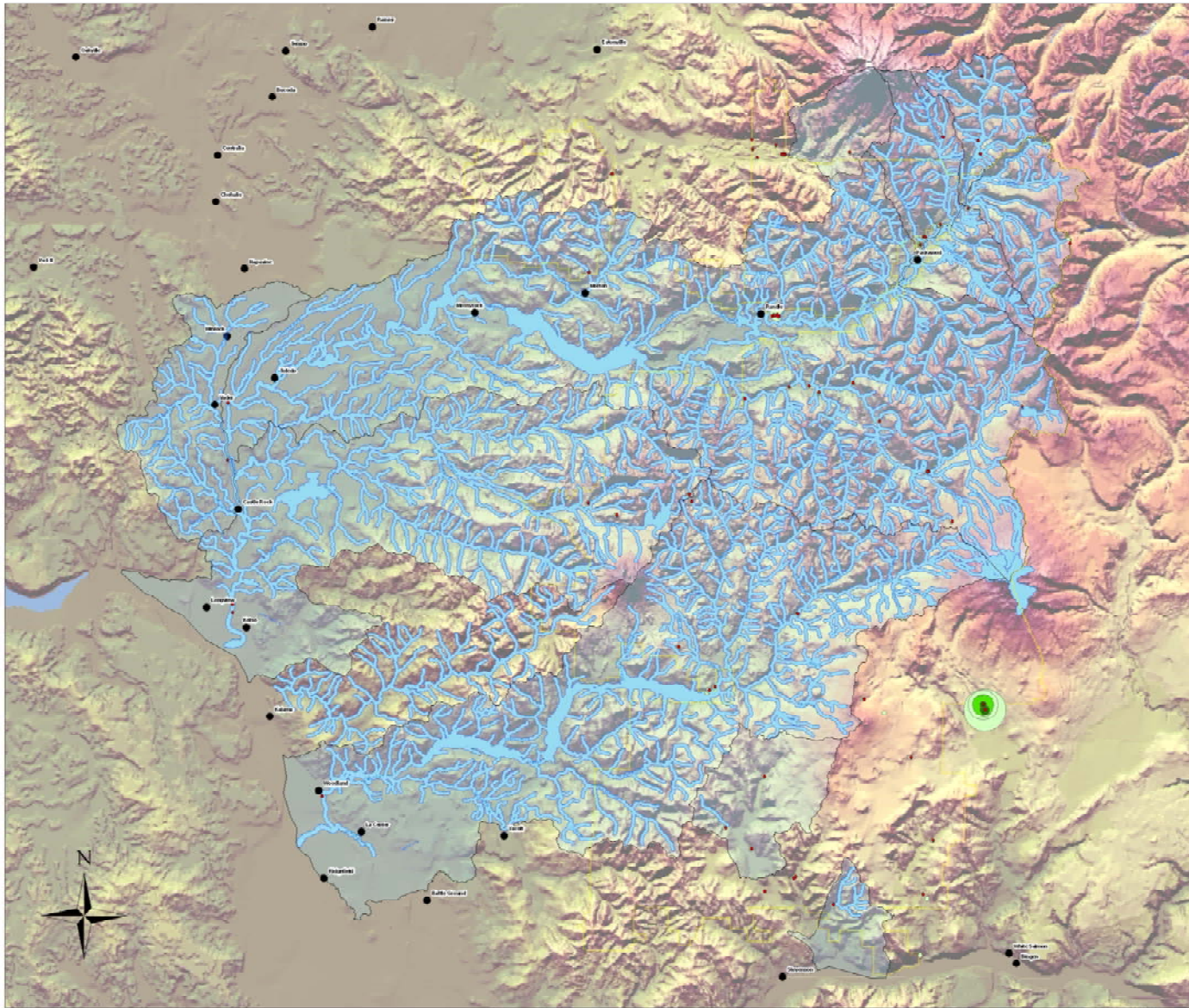
Legend

- Group A Water Sources
- Cities and Towns
- Surface Source Protection Areas
- USFS Boundaries
- Watershed Boundaries

Watershed Protection Areas

- 10 Year Run of Flood
- 5 Year Run of Flood
- 1 Year Run of Flood
- 6 Month Run of Flood

0 2.5 5 10 15 20 Miles



**GIFFORD PINCHOT NATIONAL FOREST
SOURCE WATER PROTECTION AREAS**

Legend

- Group A Water Sources
- Cities and Towns
- Surface Source Protection Areas
- USFS Boundaries
- Watershed Boundaries

Watershed Protection Area

- 10 Year Time of Travel
- 20 Year Time of Travel
- 30 Year Time of Travel



Map Disclosure Statement:
The Washington State Department of Health (DOH) does not warrant the accuracy, reliability, or timeliness of any information published in this map and assumes no responsibility for errors in the content of the information provided. Persons or entities that rely on any information obtained from this map do so at their own risk.

Inventory of potential contaminant sources

- 💧 Emphasis on **POTENTIAL** sources (pollution prevention)
- 💧 **NOT all** possible sources of contamination
- 💧 **FOCUS** on possible sources of contamination that could *impact the drinking water supply*
 - *Increased turbidity affects filtration effectiveness*

Turning Data into Knowledge

- 💧 A major value in this information is incorporating it into current and future land use decisions
- 💧 Web based for easy and up to date access
 - Query driven GIS mapping application
 - <http://localhost/dw/swap/app/login.cfm?app=maps>

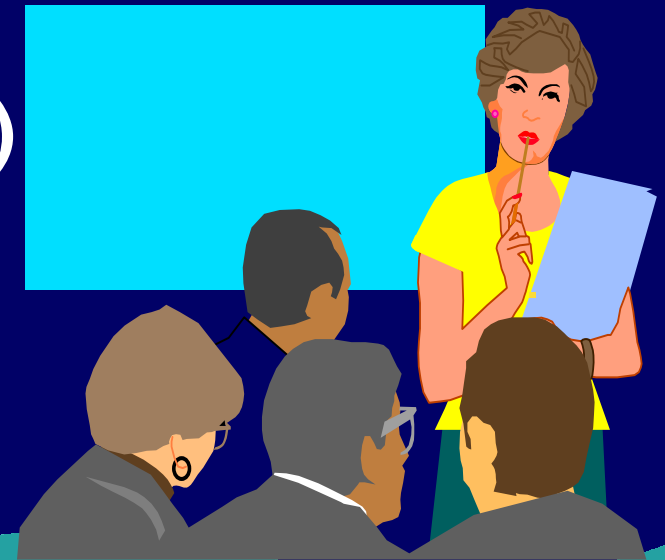
Others interested in findings:

- ◆ **SWAP results used by others**
 - Watershed assessments
 - State Management Plan for pesticides
 - Permitting (gravel mines)
 - Target outreach (farm plans)
 - Target compliance inspections
 - Federal land use planners
 - Regulators
 - Consultants
 - Citizen groups



Summary

- 💧 **SWAP GIS data will be accessed via the internet by a variety of users and needs.**
- 💧 **It will be accessible through any standard web browser.**
- 💧 **Goal: increased use of SWAP data by local governments and citizens for more informed decision making (land use plans, zoning, etc...)**



Questions?

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